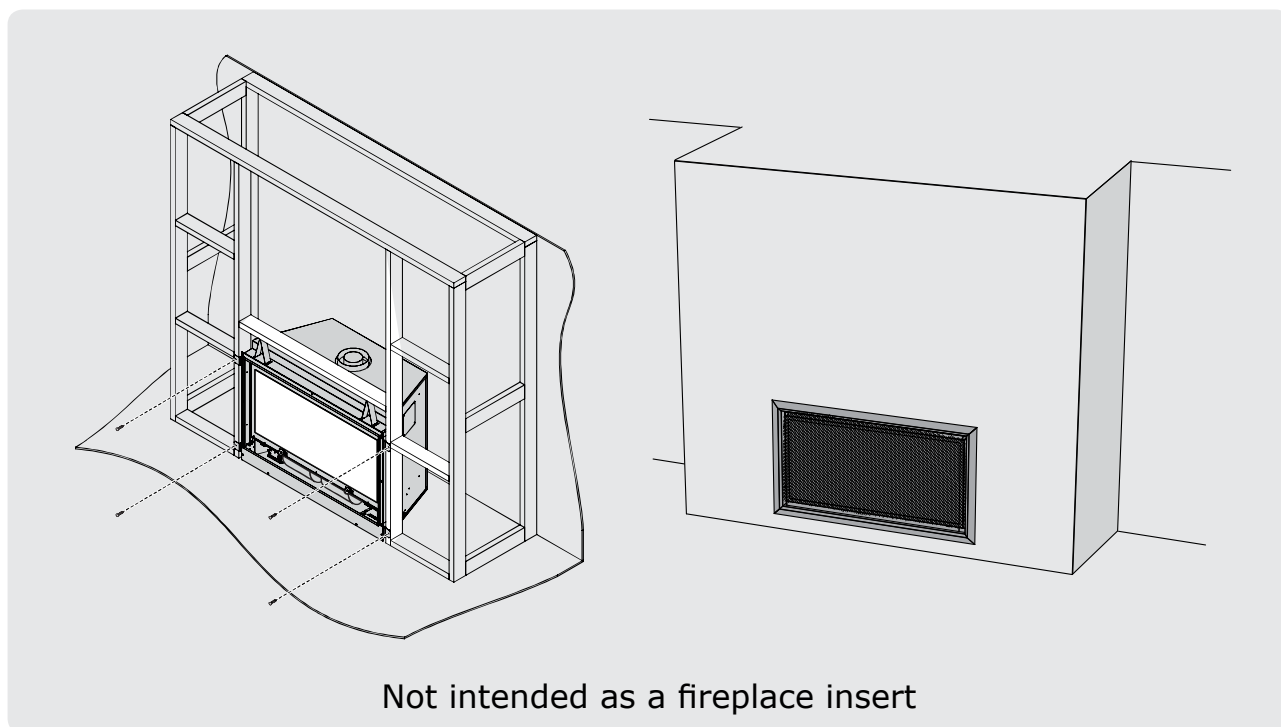


## Installation Manual



Appliance (including flue) is installed after framing and before cladding. Rinnai strongly recommend appliance is fully tested before any cladding materials are applied.

Cladding must be installed up to the flange and not over it. Any overhang will alter the performance of the appliance and cause an unsafe situation.

Appliance must be installed with a Rinnai supplied flue system.

Installation may require two people due to the size and weight of the appliance.

Appliance must be installed, commissioned and serviced by a licensed tradesperson in accordance with all applicable local rules and regulations.

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## **WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.



For assistance or additional information contact Rinnai on 0800 RINNAI (0800 746 624).

# Before installation

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Unpack the appliance and components and check for damage. DO NOT install any damaged items.



Check all components have been supplied and that you have the correct gas type.



Read these instructions to get an overview of the steps required before starting the installation. Failure to follow these instructions could cause a malfunction of the appliance. This could result in serious injury and property damage.

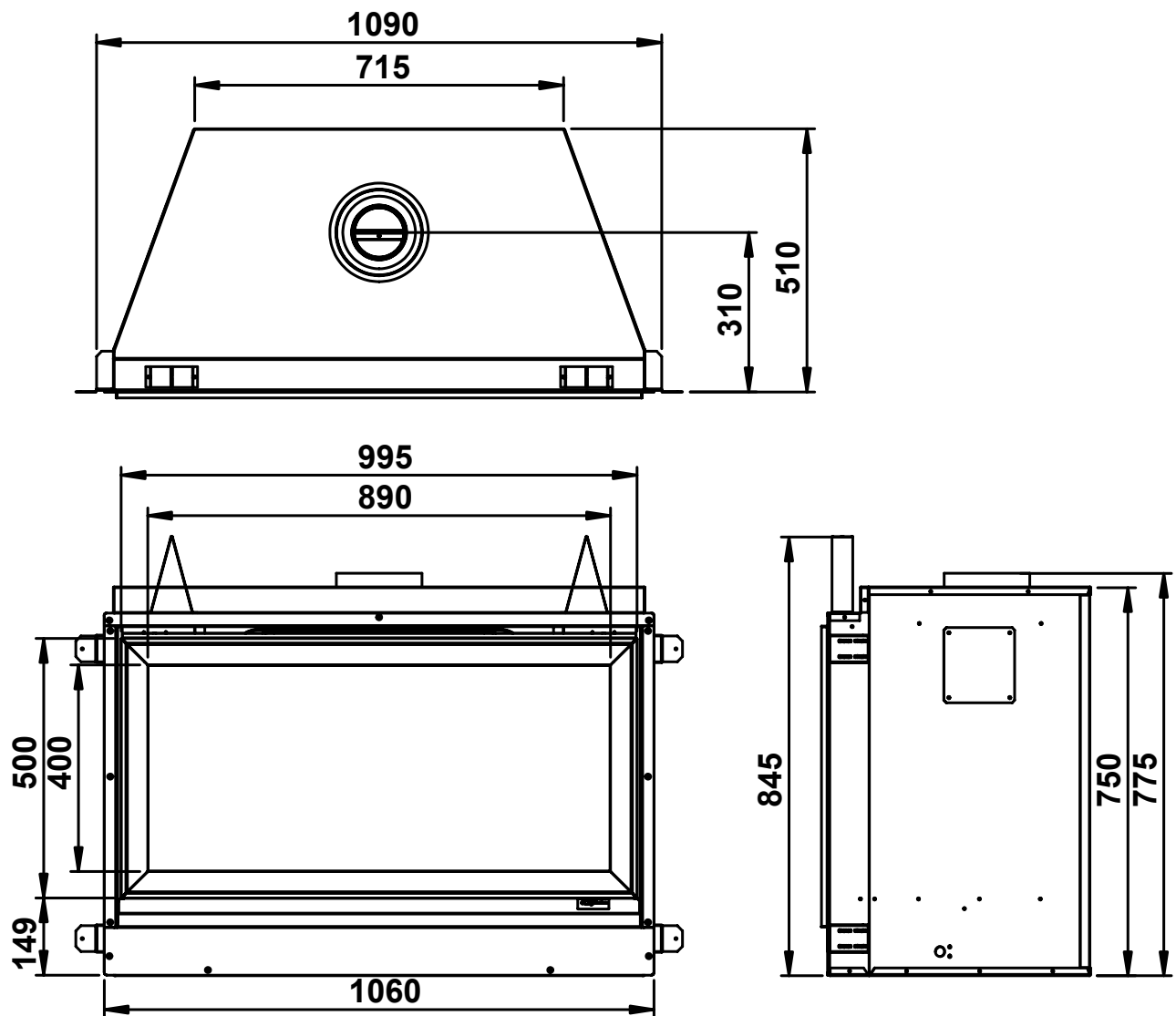
## Specification

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<b>Description</b>	<ul style="list-style-type: none"><li>• Direct vent inbuilt gas fireplace (natural draft)</li><li>• Glass front</li><li>• Convection fan (top air discharge)</li><li>• Remote control, 7-day programmable timer</li></ul> <p>Recommended for a new build installation into a false (mock) chimney. Not suitable for retrofitting into an existing masonry fireplace.</p>
<b>Combustion Method</b>	Ceramic top pan burner
<b>Data Plate</b>	Centre front of base panel (behind the service panels)
<b>Flue</b>	Balanced flue: inner = 100 mm, outer = 170 mm Appliance must be installed with a Rinnai supplied flue system
<b>Gas Connection</b>	½ " BSP male flare
<b>Gas Type</b>	NG and General Product LPG
<b>Heating Area</b>	Heats up to 100 m <sup>2</sup>
<b>Ignition</b>	Integrated sparkler to pilot
<b>Input/Output</b>	Input: 19-33 MJ/h Output: 4.2-7.5 kW
<b>Noise Level</b>	37-45 dB(A)
<b>Power Consumption</b>	High 50 W Standby <1 W Standard electrical connection is to the right side of the appliance
<b>Safety Devices</b>	Light to pilot, delayed ignition, overheat switch, electronic flame supervision (flame failure), and combustion chamber pressure relief.
<b>Temperature Control</b>	Thermostatic, temperature control range 7-32 °C
<b>Thermal Efficiency</b>	80%
<b>Weight</b>	60 kg

## Dimensions (mm)

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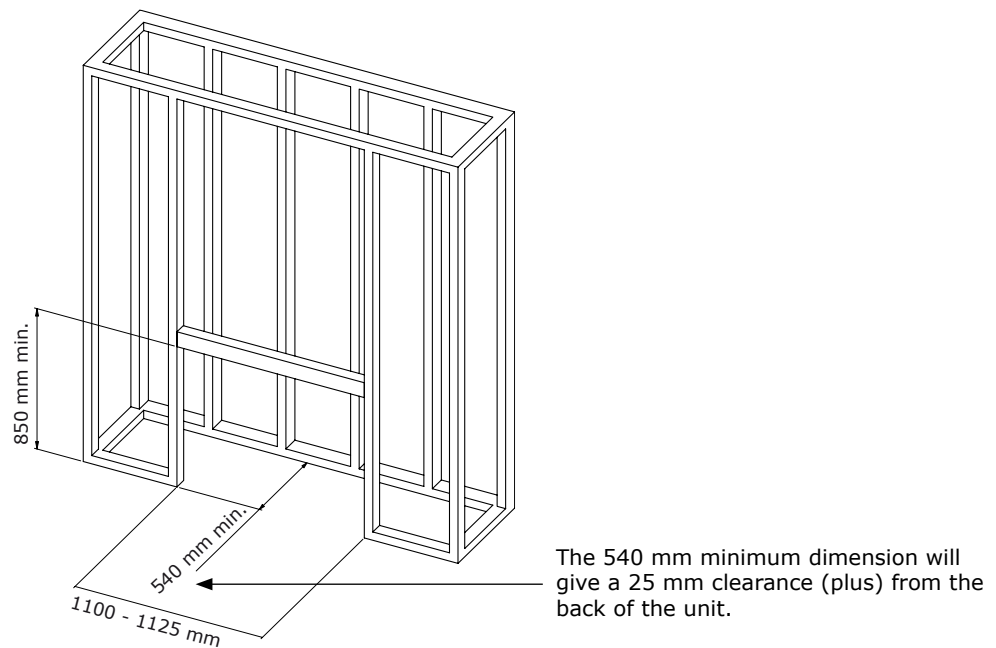


# Location

The main points governing location are flueing and warm air distribution. The heater must not be installed where curtains or other combustible materials could come into contact with the appliance. In some cases curtains may need restraining. Refer next page for clearance details.

The heater must be positioned on a flat level surface. For installations further up the wall, the heater needs to be supported, either construct a base using board or support with joists.

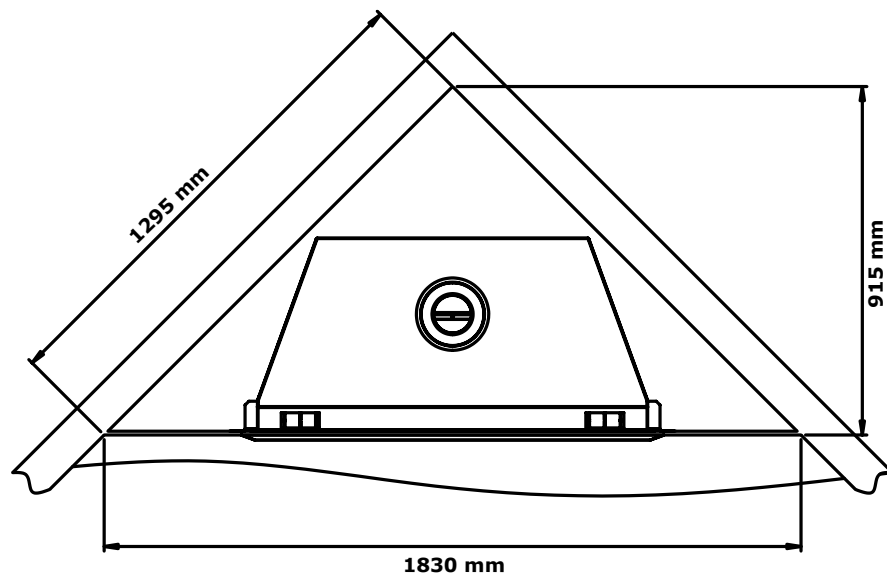
## Enclosure dimensions



A 25 mm clearance is required around the unit (sides and back).

## Enclosure dimensions in a corner

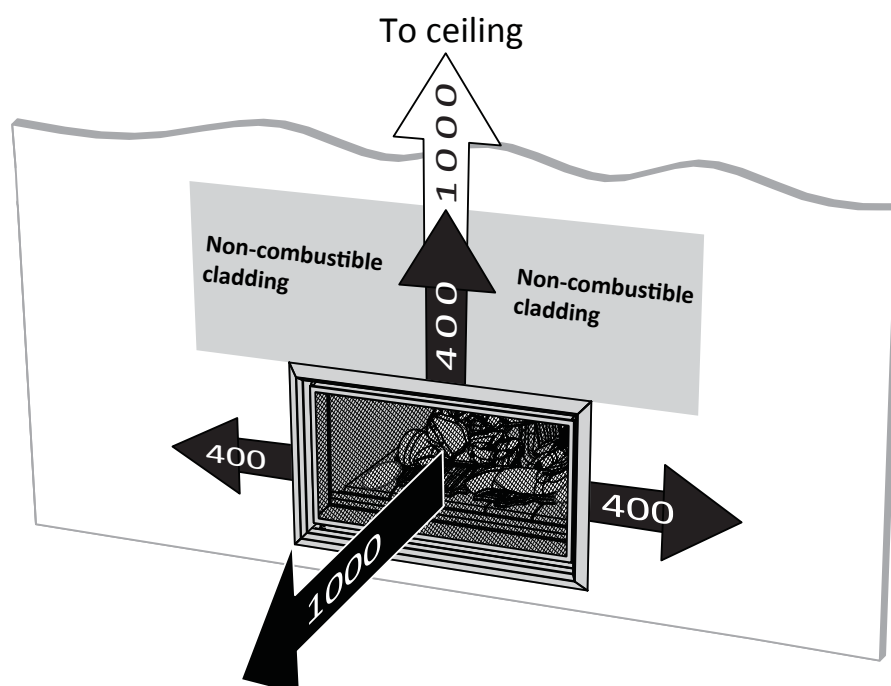
These are the minimum dimensions required if using the width, height and depth dimensions above.



# Clearances

The appliance must not be installed where curtains or other combustible materials could come into contact with the heater. In some cases curtains may need restraining.

The clearances listed below are minimum clearances unless otherwise stated. There are further details on mantel and surround clearances on the next page.



## Up-wall installations

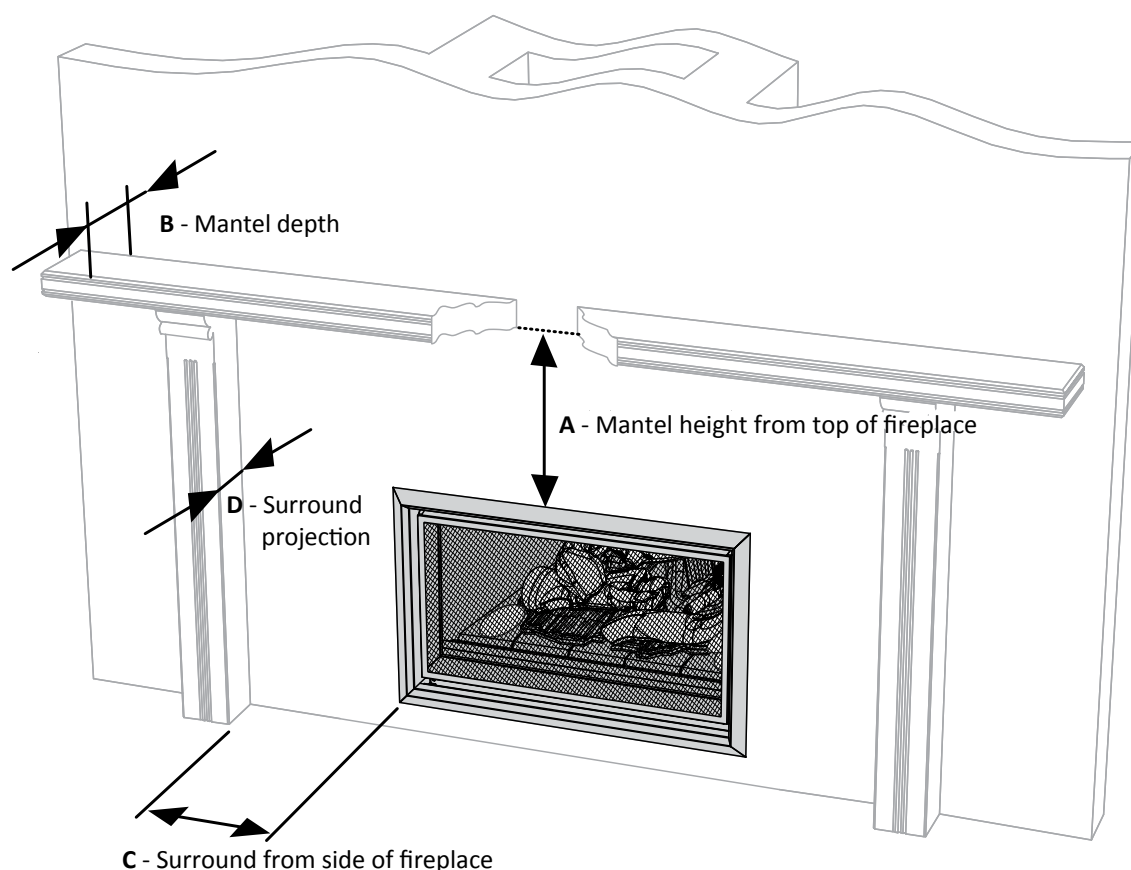
If the Symmetry is being installed up the wall and close to the ceiling, the recommended minimum clearance is 1000 mm.

## Non-combustible cladding

Non-combustible cladding such as 9 mm Eterpan MD<sup>1</sup> (extending at least the full width of the appliance and 400 mm in height) to be installed directly above the fire as shown. This is required to minimise the risk of scorching or fire in the event of a power failure (fan will stop running and hot air will rise directly above the unit).

<sup>1</sup> 9mm Eterpan MD (medium density) is supplied by PBS Ltd ([www.pbs.co.nz](http://www.pbs.co.nz)). Other materials may also be suitable, please seek advice from a cladding supplier as to the correct application and specification of the material.

# Mantels, surrounds, and hearths



A mantel and surround are allowed providing they are outside the minimum clearances shown below.

<b>A</b>	Mantel height from top of fireplace	400 mm minimum
<b>B</b>	Mantel depth at 400 mm (vertical clearance)	300 mm maximum
For every 50 mm of added mantel depth, there must be an additional 100 mm of vertical clearance. For example; a mantel depth (B) of 350 mm will require 500 mm (A) of vertical clearance.		
<b>C</b>	Surround from side of fireplace	300 mm minimum
<b>D</b>	Surround projection at 300 mm (side clearance)	50 mm maximum
For every 50 mm of added surround projection, there must be an additional 50 mm of side clearance. For example; a surround projection (D) of 100 mm will require 350 mm (C) of side clearance.		

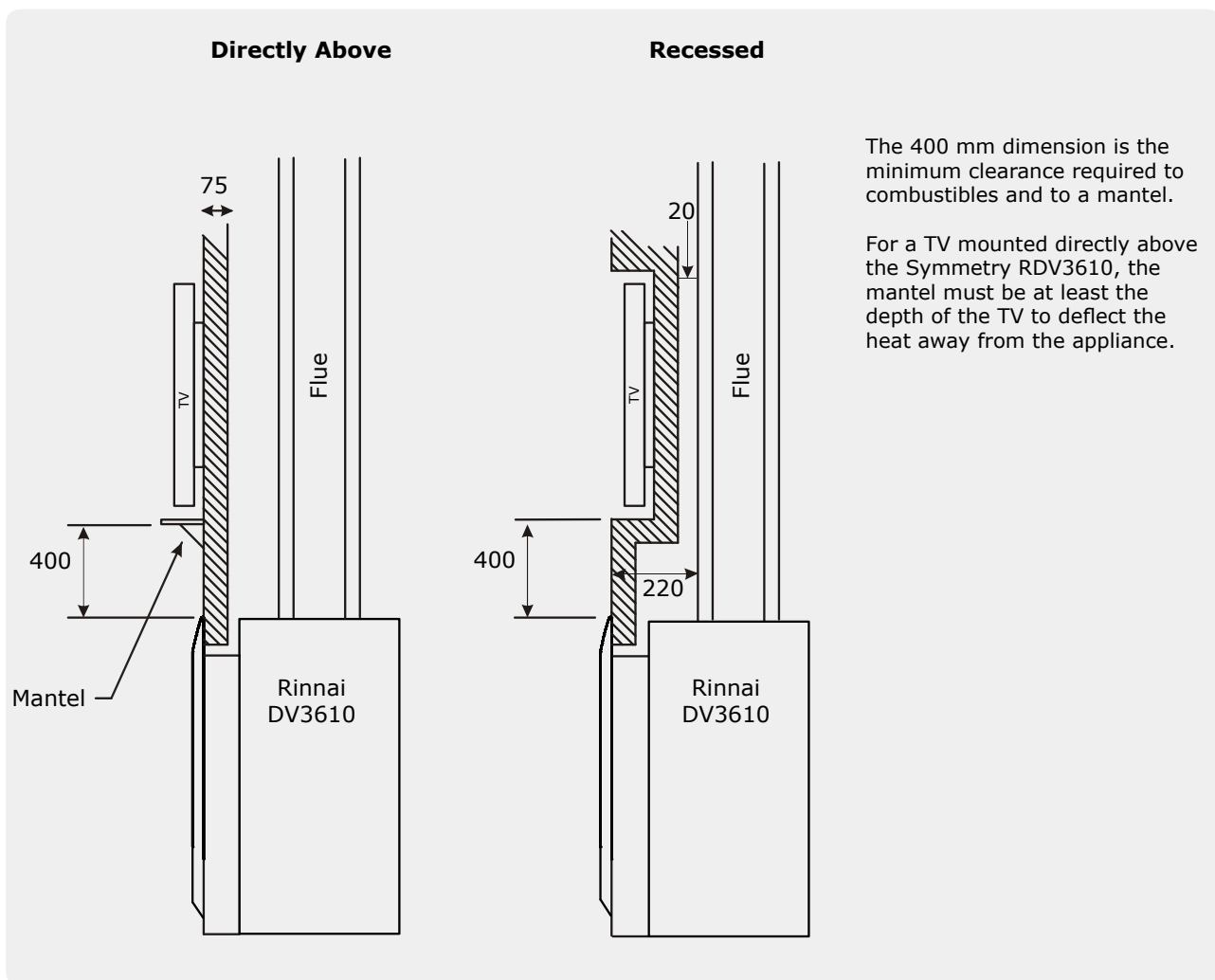
## Hearths

A hearth is not necessary but can be used for decorative purposes or protection of sensitive flooring if required. It must not obscure the front of the fire.

# TV installation above a fireplace

If installing a flat screen TV above the fire the main issue is heat. Heat from the fire and heat from the flueing components that sit behind the TV, especially if recessed.

The Symmetry RDV3610 has fan that distributes warm air from the top of the appliance out into the room. As warm air is dispersed outwards as opposed to directly upwards, installation of a TV may be an option. The following are recommended minimum clearances when installing a TV directly above the Symmetry RDV3610 or into a recess. All dimensions are in mm.



It is up to the owner to check the TV installation instructions with the TV supplier to verify clearances. Some TV manufacturers have warranty conditions that state a TV is not to be installed above a fireplace.

Rinnai does not accept any responsibility for damage to a TV resulting from the use of this information.



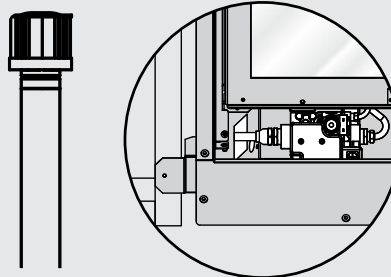
# Installation guide overview

This overview is intended to provide installation information at a high level. Further detail on each of the steps are provided in the following pages.

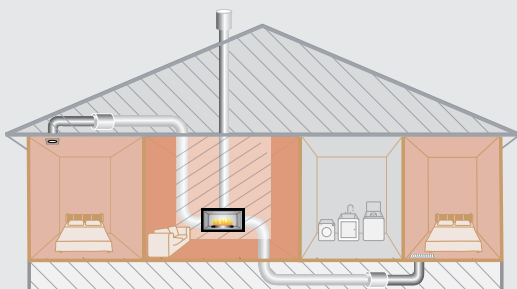
- 1 Build frame and complete electrical connection.



- 2 Install brackets, Symmetry unit and fix unit to frame. Install flue and complete gas connection.



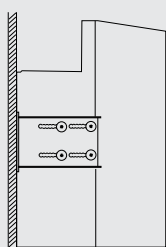
- 3 Install ducting kit (if purchased) and gas pipe.



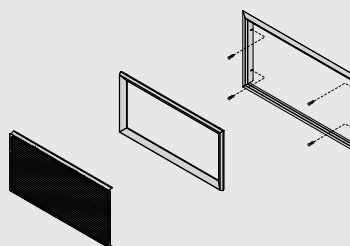
- 4 Install flue restrictor (if required), log set, test pressures and establish flame pattern.



- 5 Fit cladding, ensuring that non-combustible cladding is installed above the unit (p. 7).



- 6 Fit inner frame, outer frame and mesh guard (if purchased)



- 7 Complete commissioning checklist.

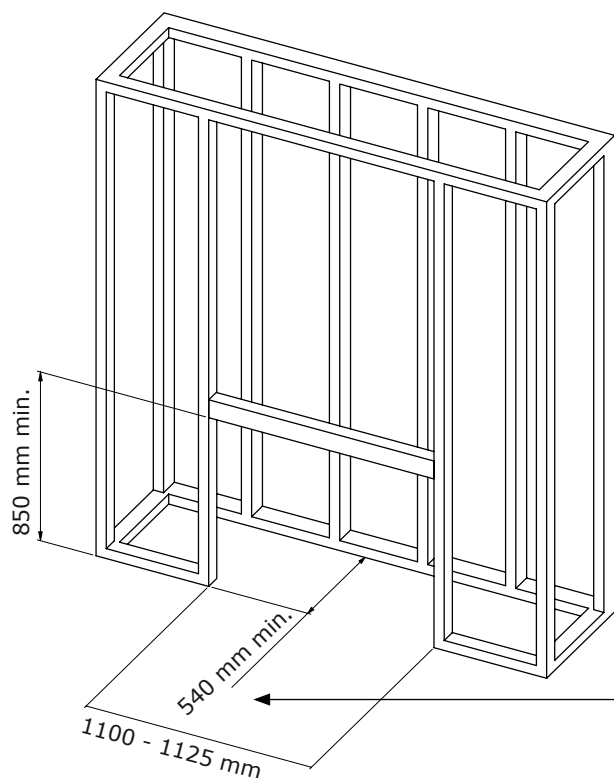


# Building the frame

Using the dimension drawing below and the information on pages 5-8, construct a frame.

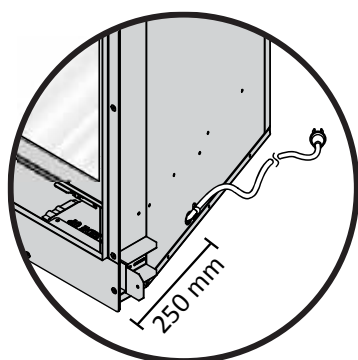


A 25 mm clearance is required around the unit (sides and back).



The 540 mm minimum dimension will give a 25 mm clearance (plus) from the back of the unit.

## Electrical connection



The standard electrical connection is to the right side of the front of the appliance. If necessary this can be changed by an electrician to terminate on the left. The appliance must not be located immediately below a socket outlet (potential fire hazard).

The connection is either direct wired or connected to a power point within the cavity. A 1500 mm power cord is supplied with a 3-pin plug. This must be connected to a dedicated earthed power point. The electric isolation switch must be accessible after the appliance has been installed.

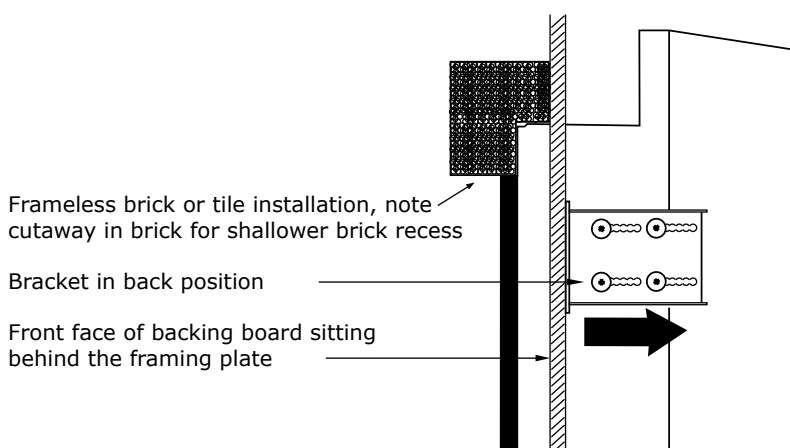
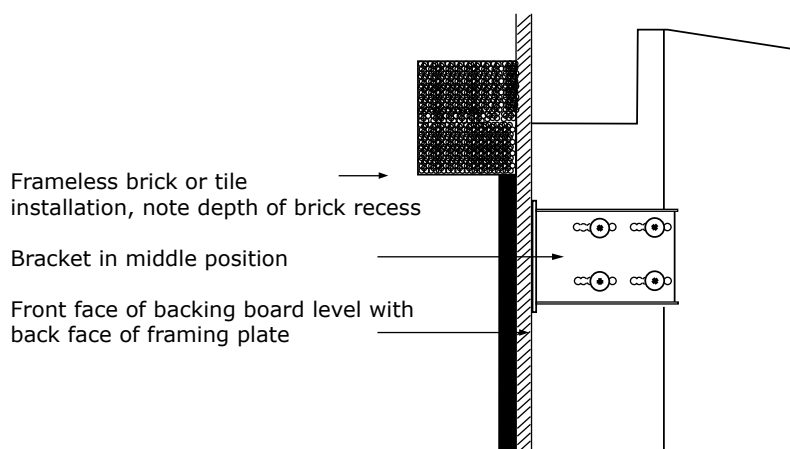
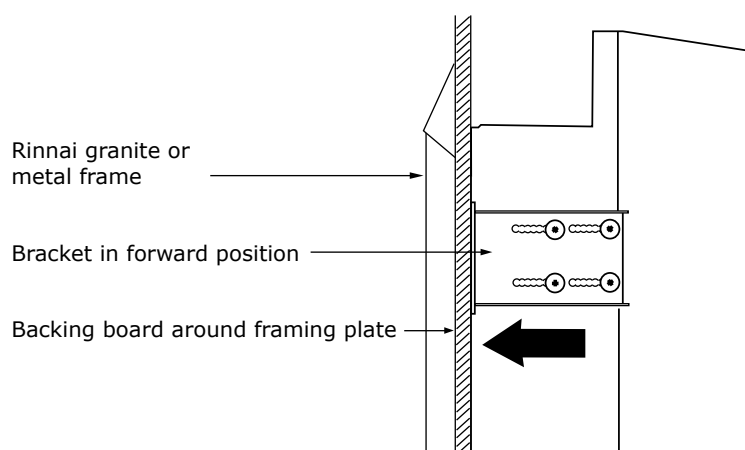
The electrical cord is not fire rated and should not come into contact with the fire. If the supply cord is damaged, it must be replaced by a licensed tradesperson. This must be a genuine replacement part available from Rinnai, part number 6765B.

# Bracket installation

Install the four metal mounting brackets supplied onto the Symmetry RDV3610. The position of the brackets will depend on the cladding thickness and type of installation (framed or frameless).

The Symmetry RDV3610 can be installed with the Rinnai granite and metal frames, and also as a frameless installation. The frameless installation can have brick, rock veneer, or tiles, these sit tight up against the framing plate of the fireplace.

The metal mounting bracket adjusts 20 mm to allow for the different cladding thicknesses, refer diagrams below.

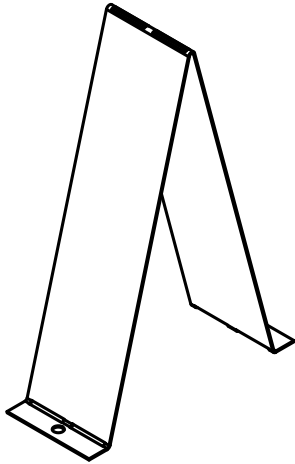


# Fixing the unit to the frame

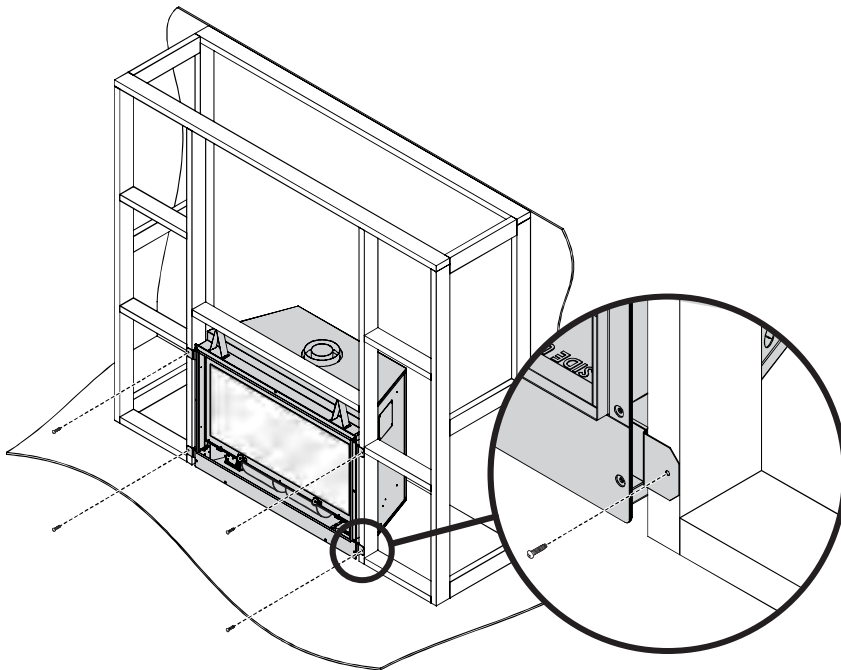
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The Symmetry RDV3610 comes pre-assembled with the burner already in position. For all installations the unit **MUST BE** positioned on a level surface.

1. Position the unit inside the cavity.
2. Bend and secure the two metal stand-offs supplied with the unit into position. These provide the required 150 mm minimum vertical clearance to the upper lintel.



3. Fix unit to frame with the four mounting brackets. These act as seismic constraints as well as providing the horizontal clearance to the frame.

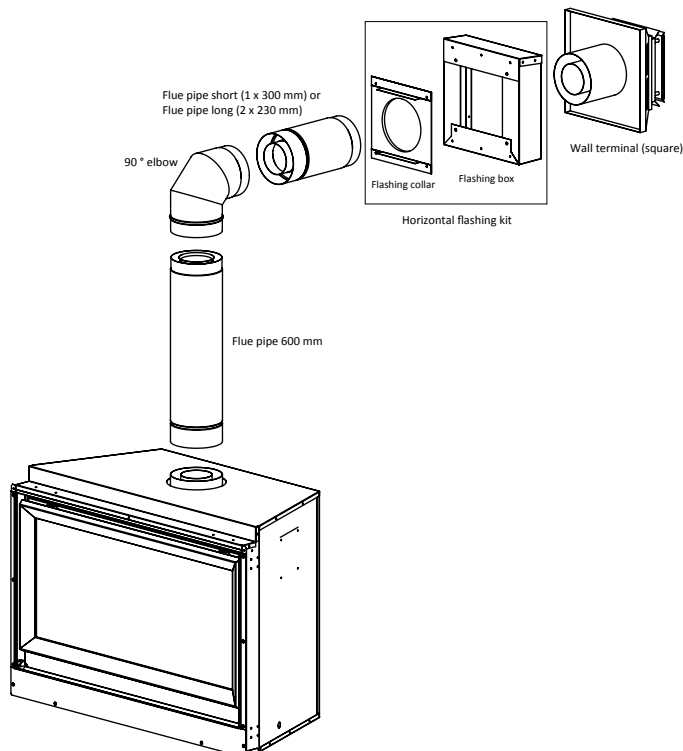


4. Install glass front, this will help protect the unit while the remaining installation work is completed. The carton in which the Symmetry is packaged has a cardboard cut-out that is the same size as the glass frame. This can also be used to protect the unit during installation.

# Flue installation - Rinnai flue kits

Rinnai Symmetry RDV3610 flue kits have been based on the flue configurations shown. If you have a combined vertical and horizontal flue configuration you can order separate components to suit.

## Horizontal Flue



### RDV3610 Flue Kit Horizontal A (short, R3660)

Contains:

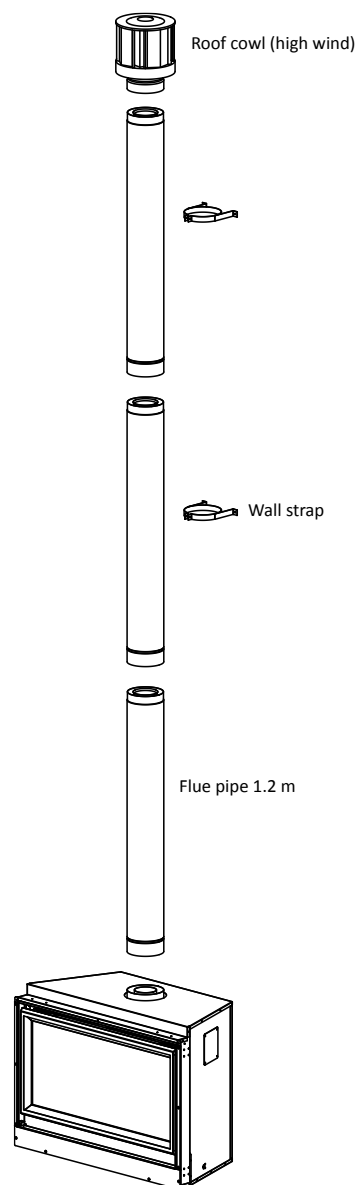
- Flue pipe 600 mm x 1
- Elbow 90 ° x 1
- Flue pipe 300 mm x 1
- Wall thimble x 1
- Flashing x 1
- Wall terminal x 1

### RDV3610 Flue Kit Horizontal B (long, R3661)

Contains:

- Flue pipe 600 mm x 1
- Elbow 90 ° x 1
- Flue pipe 230 mm x 2
- Wall thimble x 1
- Flashing kit x 1
- Wall terminal x 1

## Vertical Flue



### Flue Kit Vertical 3.6 m (R3665)

Contains:

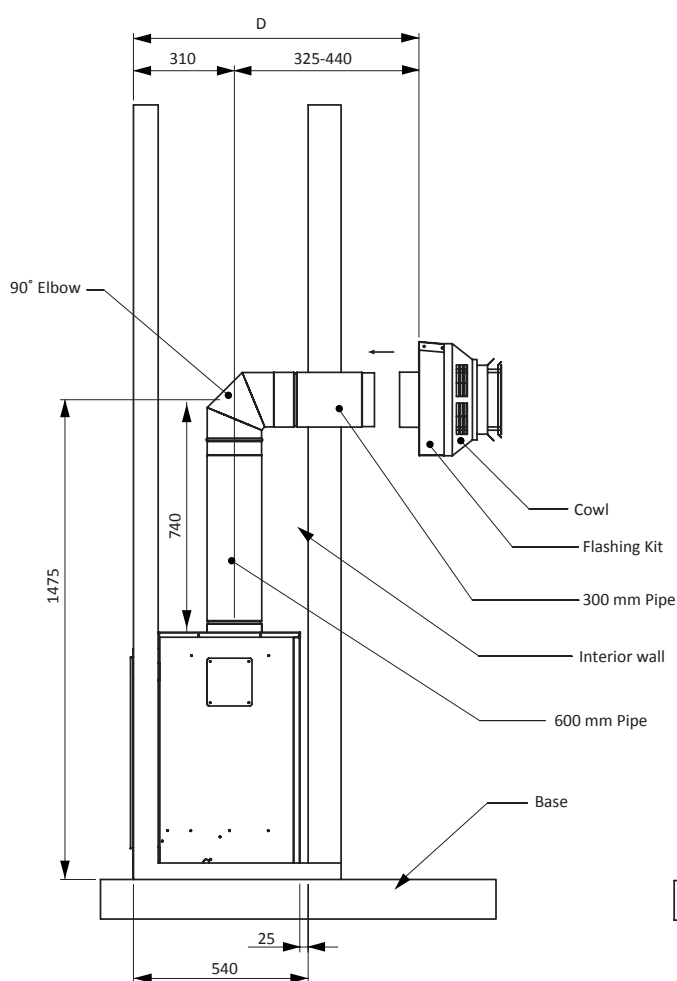
- Flue pipe 1.2 m x 3
- Wall strap x 2
- Roof cowl (high wind) x 1

# Flue installation - Rinnai flue kits

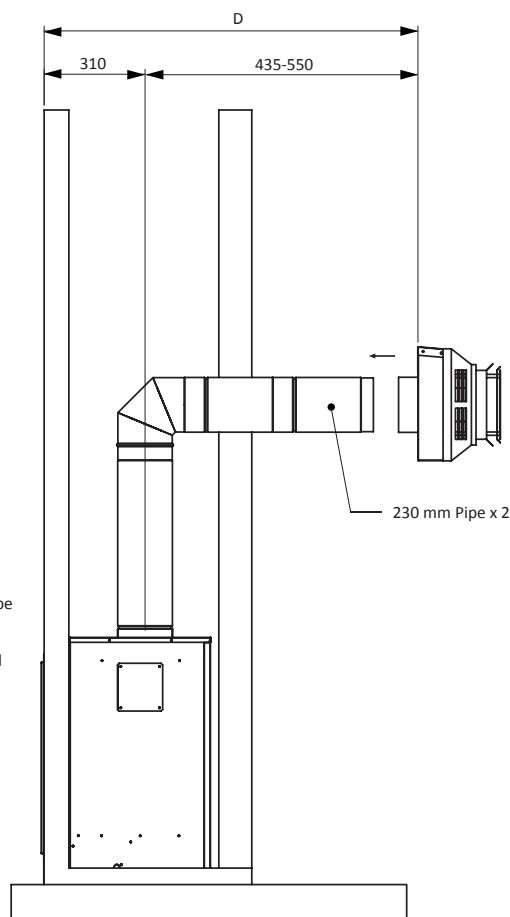
## Symmetry RDV3610 horizontal flue kits and dimensions

The following diagram explains the components, dimensions (mm) and appropriate flue kits available for differing horizontal flue installations. Refer to the 'Distance from Appliance to the Cowl' table to calculate what flue pipe length and/or kit you may need.

**RDV3610 Short Horizontal Flue Kit A (R3660)**



**RDV3610 Long Horizontal Flue Kit B (R3661)**



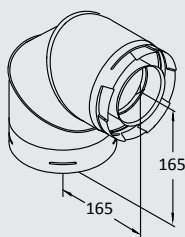
## Distance from the appliance to the cowl

	Horizontal Flue	D	
<b>Kit A</b>	300 mm Pipe	635	750
<b>Kit B</b>	230 mm Pipe x 2	745	860
	300 mm + 230 mm Pipe	825	940
	300 mm Pipe x 2	895	1010

- Adjust the distance by sliding the cowl on the pipe
- At its maximum position, the cowl should still keep a 45 mm overlap

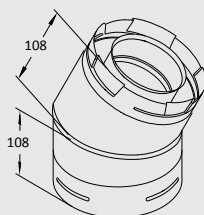
# Flue installation - Rinnai flue components

## RDV3610 Flue Elbow 90° Bend (R3643)



Used to facilitate vertical and horizontal flueing. Elbow swivels 360° at base. Angle not adjustable.

## RDV3610 Flue Elbow 45° Bend (R3642)



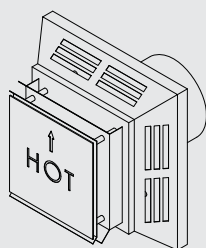
Offsets obstructions as needed. Elbow swivels 360° at base. Angle not adjustable. Comes packaged as a set of two.

## Bends - effective length

Once joined effective length reduces 35 mm:

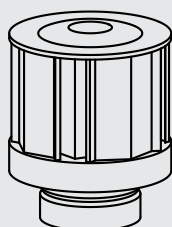
- 90° = 130 mm
- 45° = 73 mm

## Wall Terminal (R3650)



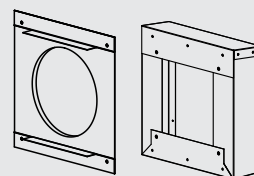
Flue terminal required for all horizontal installations (aluminium).

## Roof Cowl (R3651)



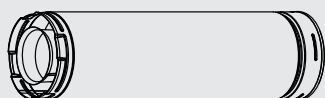
Flue terminal required for all vertical installations (aluminium).

## Horizontal Flashing Kit (R3646)



Flashing components used to join internal flue to outside flue terminal (to provide a weather-tight seal) in horizontal flue installations.

## RDV3610 Flue Pipes



150 mm (R3630)	600 mm (R3634)
230 mm (R3631)	900 mm (R3635)
300 mm (R3632)	1.2 m (R3636)
450 mm (R3633)	

Pipe used to construct horizontal and vertical flueing (cannot be cut to size).

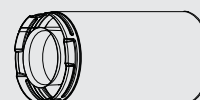
## Flue Pipes - effective length

Once joined nominal length reduces 35 mm:

Nominal	Effective
• 150 mm	= 117 mm
• 230 mm	= 194 mm
• 300 mm	= 270 mm
• 450 mm	= 422 mm
• 600 mm	= 575 mm
• 900 mm	= 879 mm
• 1200 mm	= 1184 mm

Effective lengths are variable (from 35 mm) due to rounding of the flue pipe dimensions.

## RDV3610 Flue Extension



75-175 mm (R3638)  
75-360 mm (R3639)

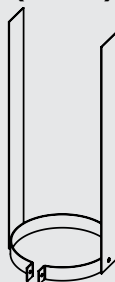
Used for extending straight lengths of flue. Available in two lengths (extending to 175 or 360 mm)

## Wall Strap (adjustable, R3647)



Used in interior/exterior installations to add lateral support to the flue. Provides a 50-200 mm clearance to combustible walls.

## Flue Elbow Strap (R3644)



Used to prevent excessive weight on the flue elbow.

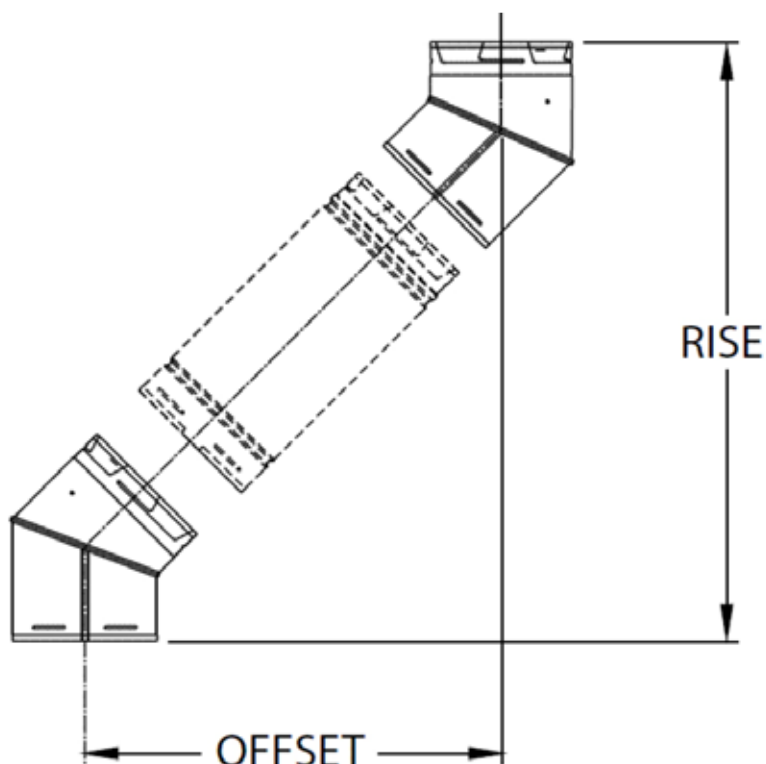
## Flue Restrictor (supplied, 11516)



For vertical installations greater than 2.3 m. Maintains efficiency by restricting air flow through the unit as flue length (flue pull) increases.

# Flue installation - 45 degree offsets

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Flue pipe (length and code)		Offset (mm)	Rise (mm)
None (bend to bend)	N/A	124	340
150 mm	R3630	203	419
230 mm	R3631	257	473
300 mm	R3632	311	527
450 mm	R3633	417	633
600 mm	R3684	524	740
1.2 m	R3686	949	1165



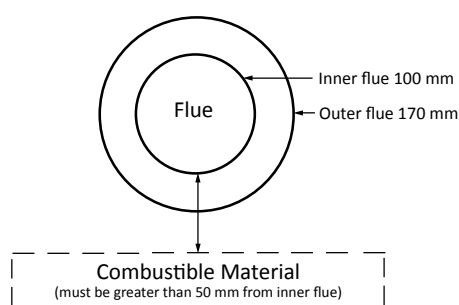
# Flue installation - general guidelines

Every gas fireplace requires a flue system that will draw effectively and clear flue products safely under all potential wind and climatic conditions.

It is the responsibility of the installer to ensure that the appliance is provided with an effective flue. Some guidelines to assist with flue design are listed below. These should be viewed in conjunction with the installation instructions provided by the flue manufacturer (included with all Rinnai Symmetry flue cowls) and with the Horizontal Flue Flashing Kit instruction sheet. These must be read and modified as necessary with reference to the particular installation

The Rinnai Symmetry RDV3610 must be installed with an approved Rinnai flue system. Approved flue components for this appliance are detailed in this manual.

## Clearance to combustibles



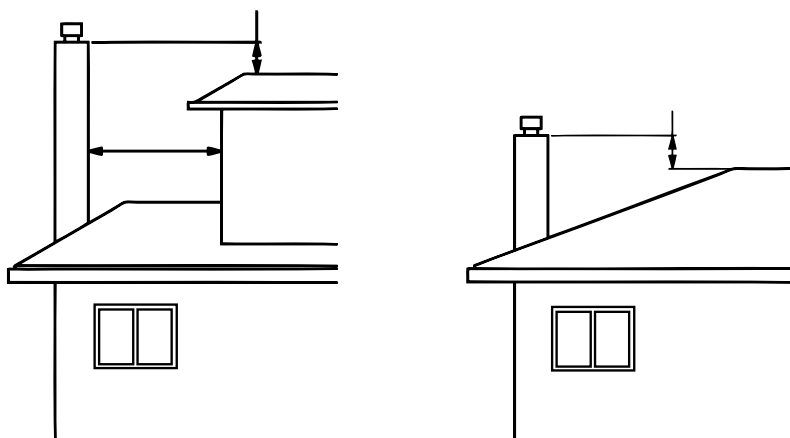
Minimum clearance from inner flue to combustible material must be greater than 50 mm (equates to 15 mm from outer flue).

## Flashings

A wall thimble and flashing kit is supplied with the Horizontal Through The Wall Kit. For all other flueing configurations flashings must be specified.

## Flue cowl clearance

To ensure products of combustion are cleared, adequate clearance for the building is required and the below guideline is recommended.



Flue cowl should have a **500 mm clearance** from any part of the building. This also applies to steeped and pitched roofs which should be clear of the ridge line as shown below. Lesser clearances may provide perfectly adequate flue systems depending on the installation. Minimum clearances are shown in NZS 5261.

# Flue installation - general guidelines

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## Flue terminal locations

Must be compliant with 'Clearances Required for Flue Terminals' from NZS 5261 2003. Flue is not to terminate under floors or in a roof space.

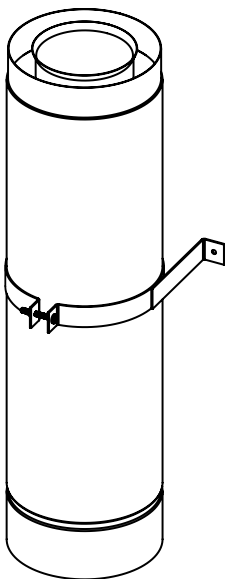
## Minimum and maximum horizontal flue length

Each flueing configuration is subject to flueing restrictions, refer to following pages for further detail. General points governing flue configurations are:

- minimum vertical flue before any offsets 600 mm
- maximum horizontal length 3.5 m
- for vertical installations greater than 2.3 m flue restrictor is required to be fitted
- bends maximum of two

## Self-supporting flue

The weight of the flue system should not be supported by the appliance—it should be self-supporting. Supporting the flue is usually completed during the framing stage with flue supports or straps within the cavity. Wall straps have been included in the Rinnai Vertical Flue Kit to assist with this. Elbow straps are also available as a separate component to prevent excess weight on the flue elbow.

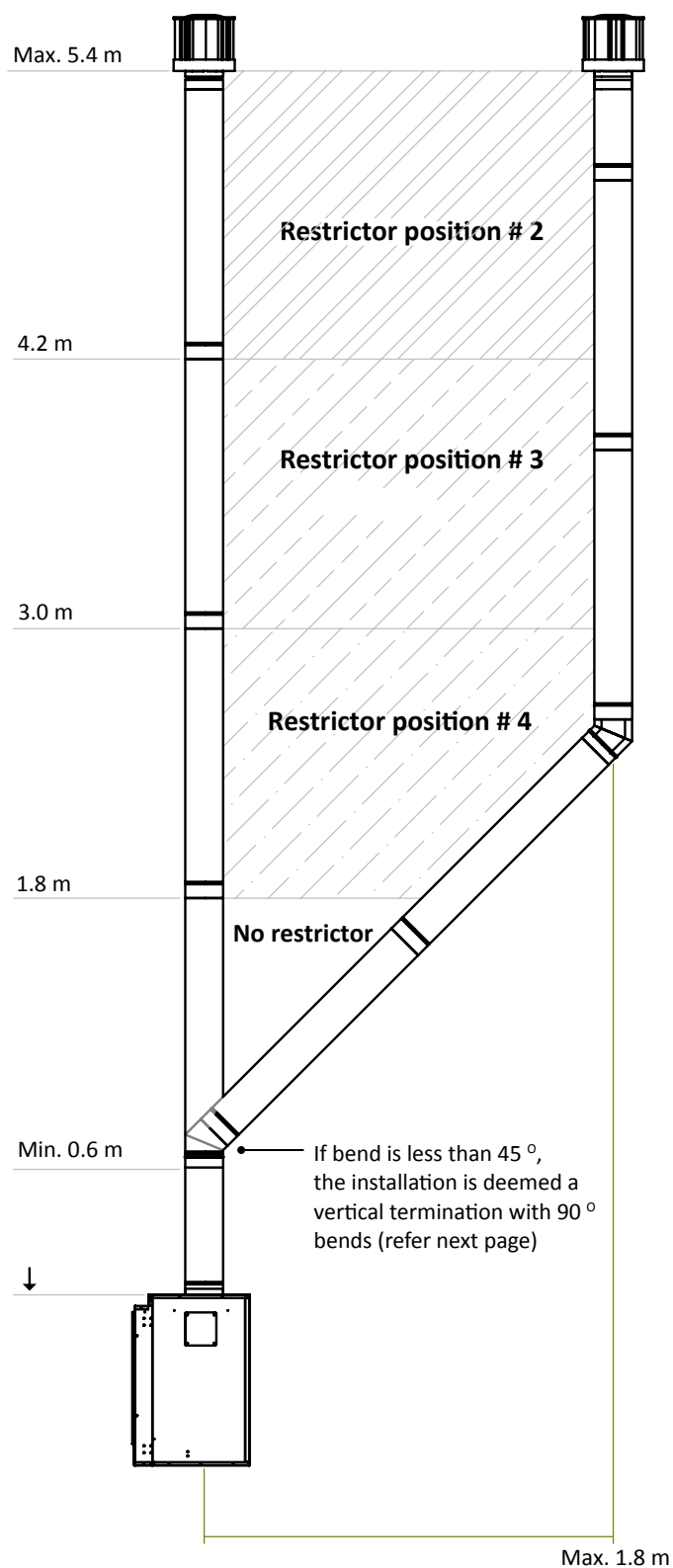


## Shared flues

Gas appliances must not be connected to a chimney or flue serving a separate fuel burning appliance.

# Flue installation - vertical termination

For vertical flue terminations with or without 45 ° bends (maximum of two). The shaded sections determine the position of the flue restrictor.

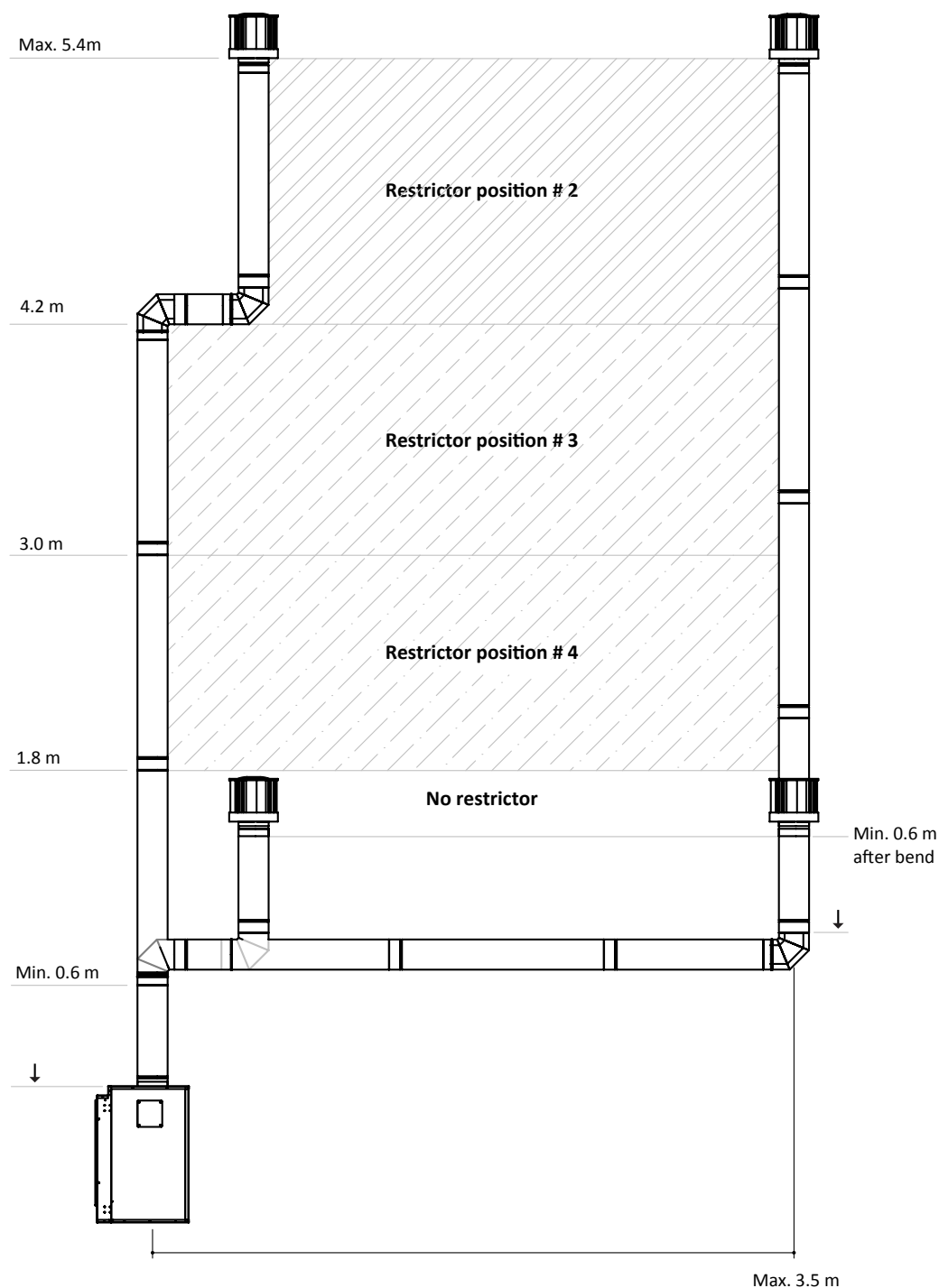


# Flue installation - vertical termination

For vertical flue terminations with two 90 ° bends (maximum of two). The shaded sections determine the position of the flue restrictor.

Horizontal runs of flue pipe must be supported to prevent any downward sags. Horizontal pipe sections should be supported at least every 1.2 m. Wall straps can be used for this purpose.

The horizontal run of flue pipe must have a 20 mm rise for every 1 m of run towards the termination. Never allow the flue pipe to run downward. A downward slope can trap heat and become a fire hazard.

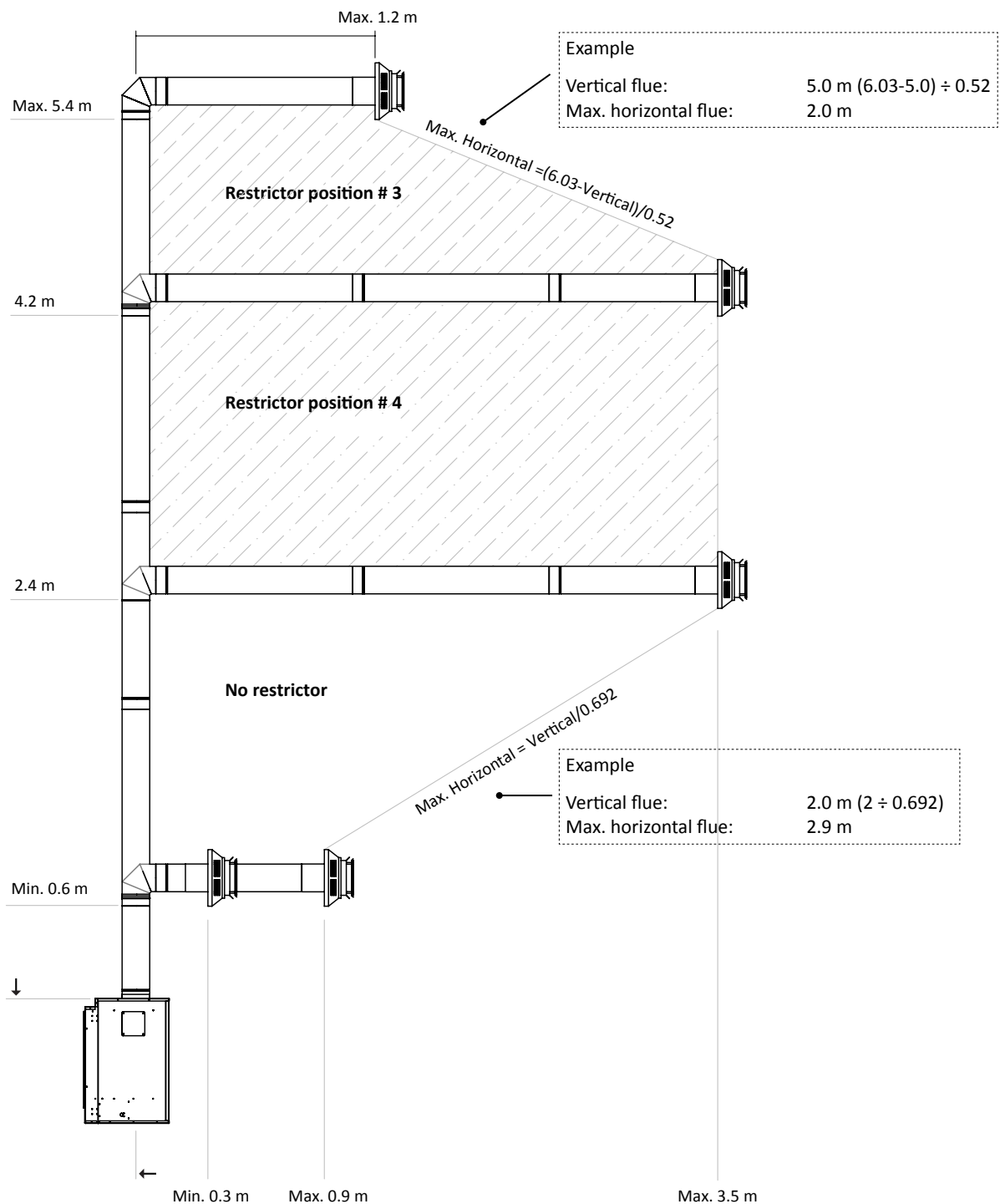


# Flue installation - horizontal termination

For horizontal flue terminations with a 90 ° bend. The shaded sections determine the position of the flue restrictor.

Horizontal runs of flue pipe must be supported to prevent any downward sags. Horizontal pipe sections should be supported at least every 1.2 m. Wall straps can be used for this purpose.

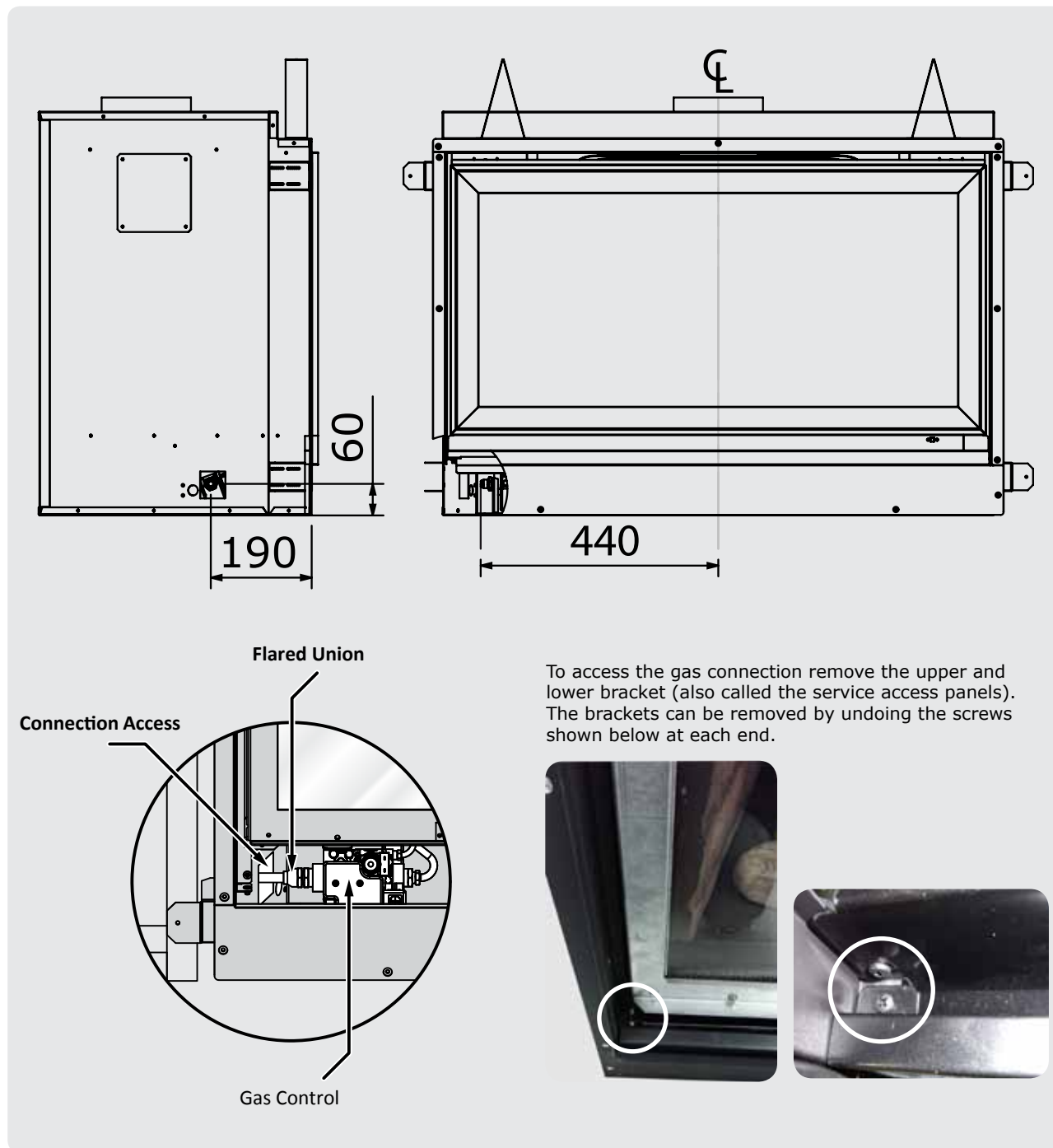
The horizontal run of flue pipe must have a 20 mm rise for every 1 m of run towards the termination. Never allow the flue pipe to run downward. A downward slope can trap heat and become a fire hazard.



# Gas connection

The gas connection from the control valve is a ½ " BSP male flare fitting. This connects straight into the gas control on the lower left hand side of the appliance.

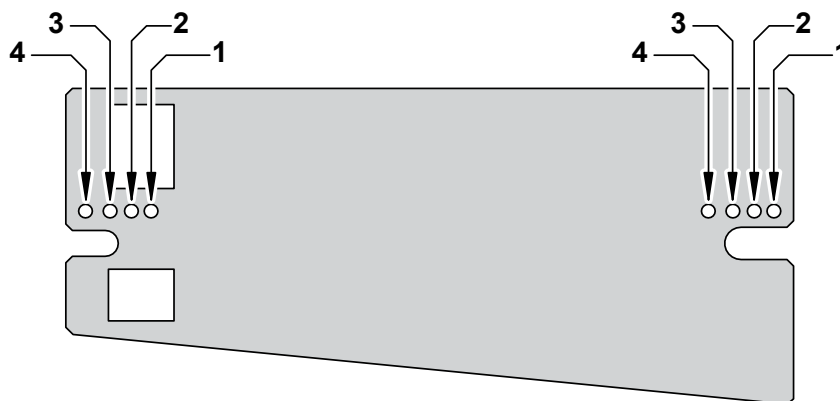
Gas pipe sizing must consider the gas input to this appliance as well as all other gas appliances in the premises.



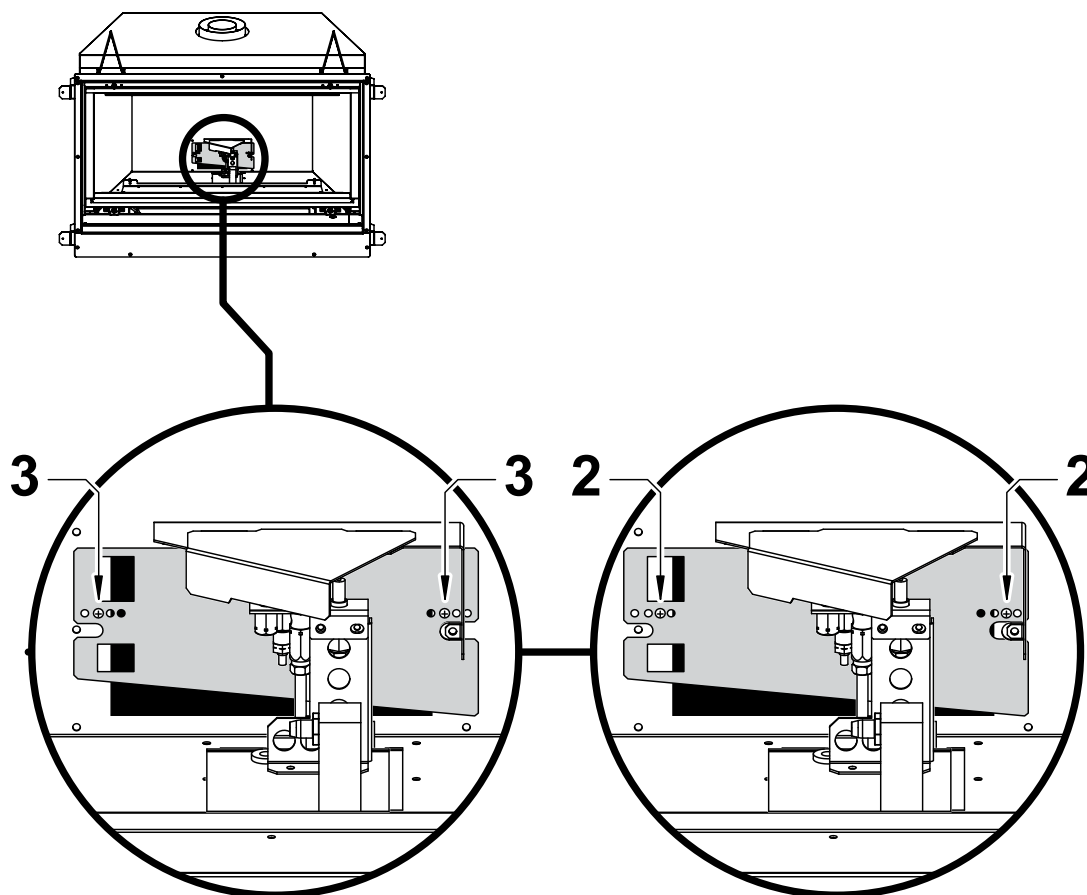
# Flue restrictor installation

The flue restrictor is required to be fitted in installations where the flue length exceeds 2.3 m. It works by limiting the amount of air required for combustion. The higher the flue the more the air is circulated, this can affect the performance of the fire.

Different flue configurations require a different positioning of the flue restrictor, please refer to the Flue installation pages to determine what setting is required. The different hole positions are shown below and also stamped on the restrictor.



Before you can install the flue restrictor you need to remove the pilot shield and carefully lift the burner bed out of the unit. Attach the flue restrictor as shown by securing with the screws provided.



# Log set installation

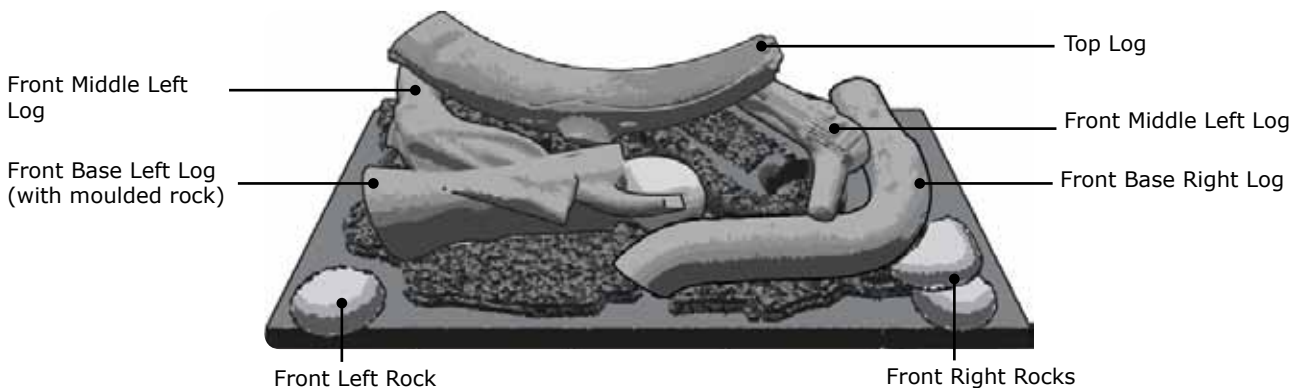
The log set (burn media) is packaged separately and consists of five log pieces and three moulded rocks. Handle the log set with care to avoid chipping.

It is important you position the pieces in order as shown below as incorrect placement can create carbon build up and affect performance. For video instruction on Rinnai Symmetry log positioning, refer to the following YouTube video:

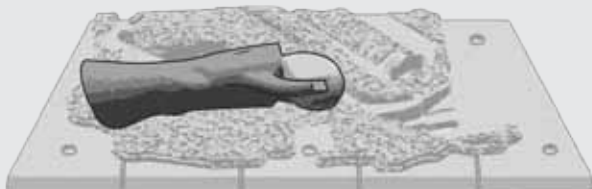
<http://www.youtube.com/watch?v=xdxoKomYj9k>

Malfunctioning due to improper log/rock placement is not covered under warranty. The unit must never be used with broken logs and should not be mixed with other burn media (except Rinnai Rockwool).

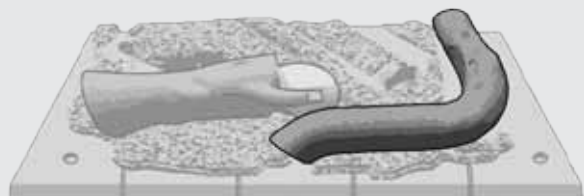
**Final Log Set Layout**



- 1 Carefully remove log set from packaging and fit Front Base Left Log in created gap. It should only fit one way.



- 2 Fit Front Base Right Log into position on the far right of the burner base.

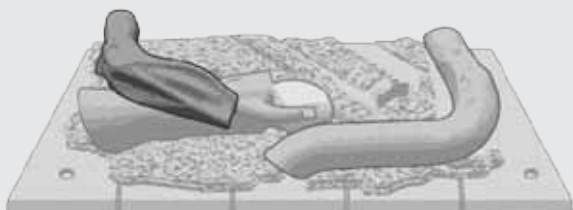




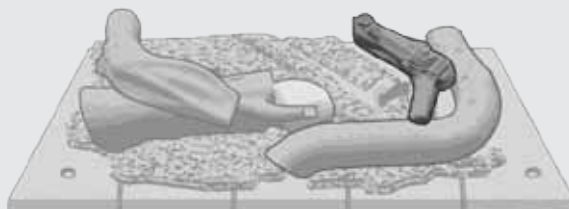
# Log set installation

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- 3** Fit Front Middle Left Log into back flat section of the burner and slot on top of Front Base Left Log.



- 4** Place Front Middle Right Log into the U-shaped groove.



- 5** Place the Top Log onto the recessed sections of the Left and Right Middle Logs. Ensure the middle elbow section rests on the top of the Bottom Log.



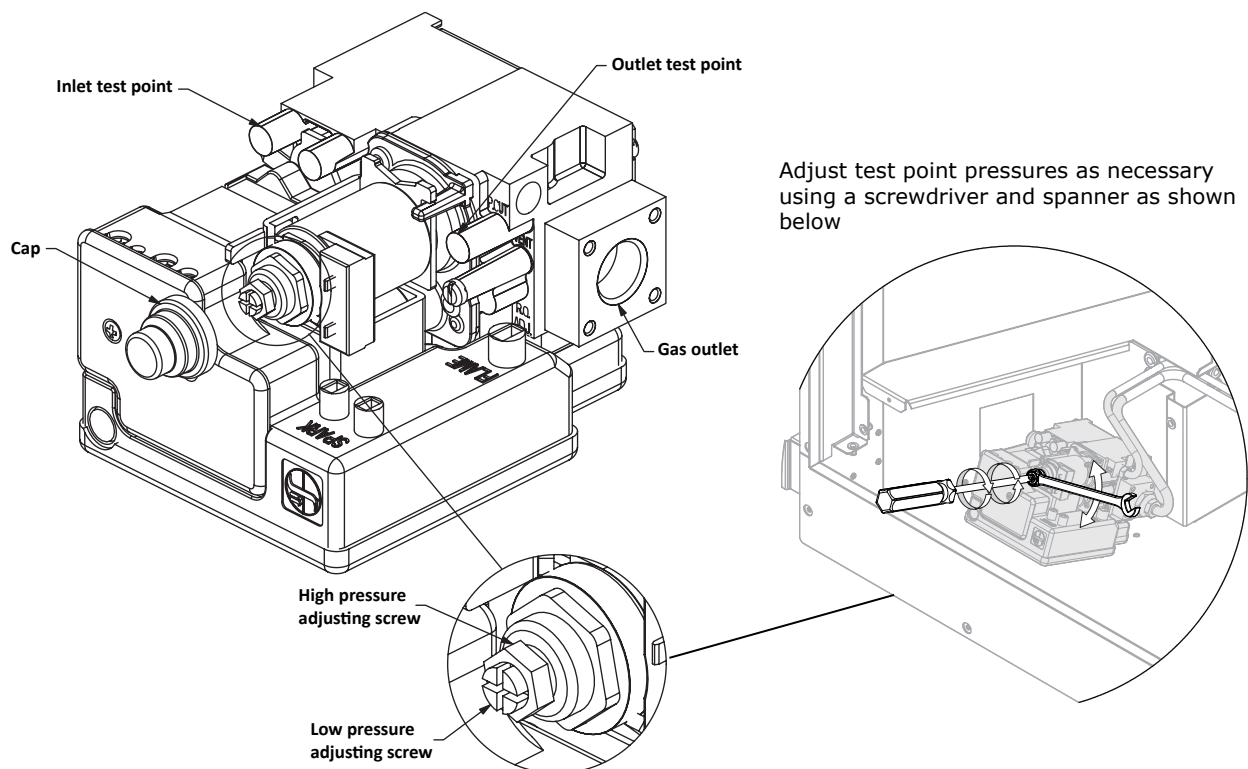
- 6** Position two of the rocks over the screw holes on the burner bed and place the remaining kidney shaped rock on top as shown.



# Test pressures

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1. Turn on the gas and power supply to the unit.
2. Refer to the data plate for applicable test point pressures.
3. The test point is on the gas control valve. Using a suitable screw driver loosen the captivated test point screw and attach a manometer.
4. Using the manual control switch (on the appliance), turn the unit on and switch to the HIGH setting and adjust the pressure as necessary.
5. Disconnect the solenoid (yellow wire). This will ensure the unit is on the lowest setting and set the appliance to the LOW setting. Adjust the pressure as necessary. Reconnect the solenoid.



6. After checking pressures, turn the unit off, remove manometer and replace test point screw.
7. Turn the heater on and off a few times to check ignition.
8. When you are satisfied that the heater is working correctly, reassemble and start the appliance to check the flame pattern (refer next page).

# Flame pattern

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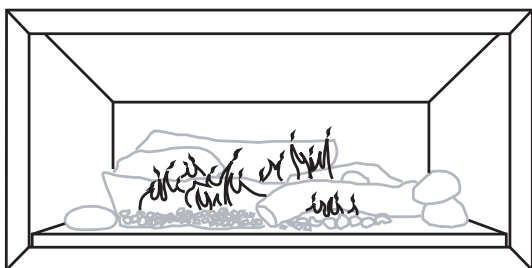
It may take approximately two hours of operation for the logs to achieve their full flame pattern and glow. During the initial burning in period, some smoke and smell may be experienced. The appliance should be run on the high setting in a well ventilated room until these dissipate. It is important to check the flame pattern during this time.

## Abnormal flame pattern

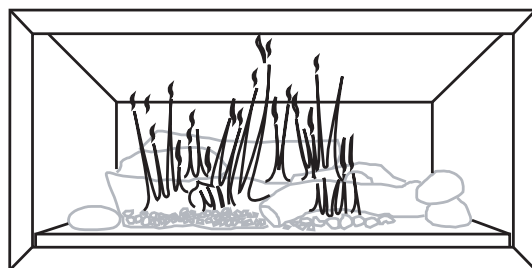
Abnormal flame performance and/or pattern can indicate a problem with the fire, such as blocked gas injectors or artificial logs/burn media have shifted during installation. There are some warning signs that could indicate a problem.

- Unusual smell from the appliance
- Continued difficulty or delay in establishing a flame
- Flame appears either very short or very long

**Normal**



**Abnormal**



- Flame only burns part way across the burner
- Severe soot building up on the inside of the glass door



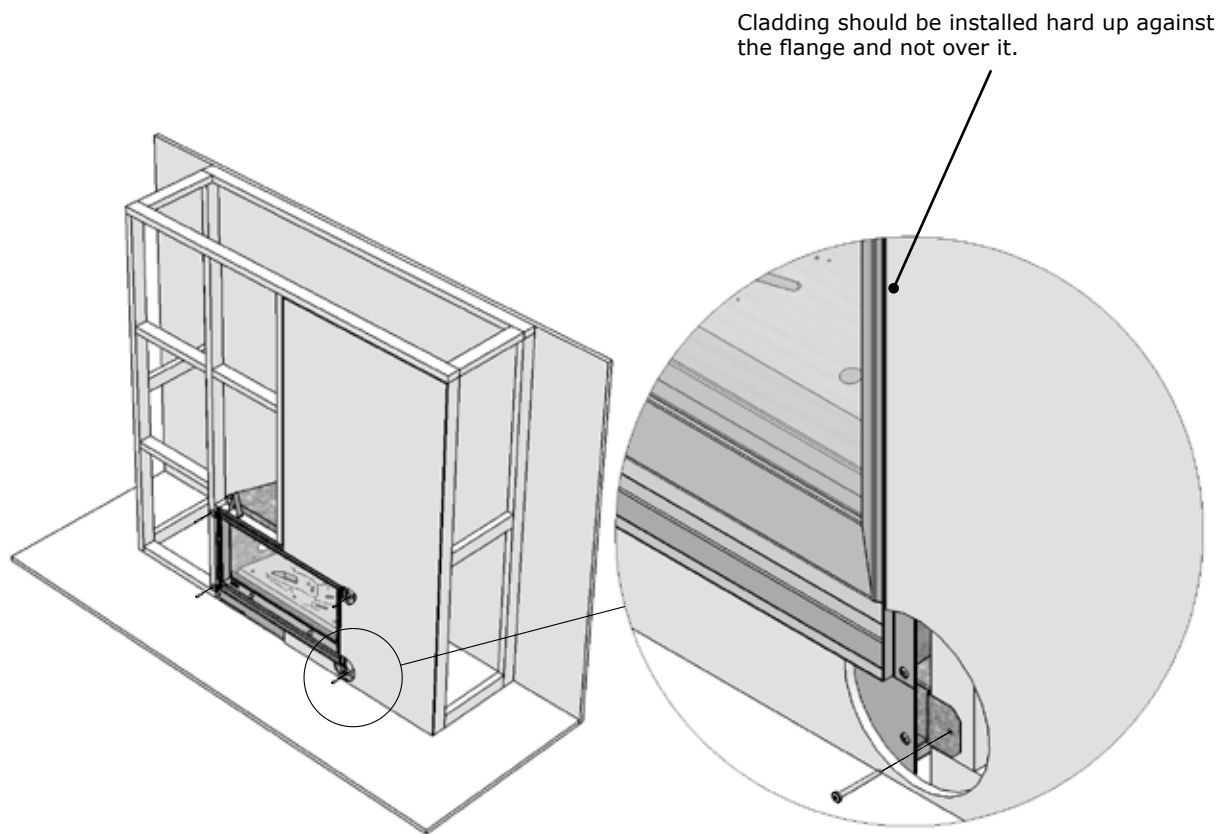
It is the responsibility of the installer to check that under normal conditions of the appliance, all flue gases are exhausted to the outside atmosphere and that there are no spillage of combustion gases into the room.

If the appliance cannot be made to perform correctly please contact Rinnai.

# Cladding

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Non-combustible cladding must be installed directly above the fire as shown on page 6. When installing cladding ensure it is installed up to the flange and not over it, any overhang will affect the performance of the appliance and cause an unsafe situation.

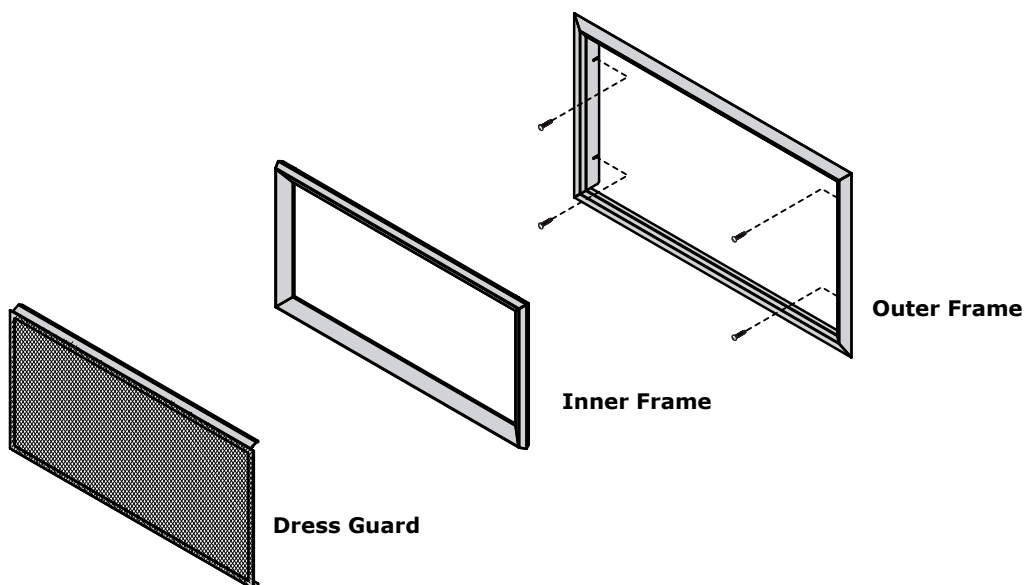


# Fitting the frames and dress guard

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Before fitting the frames and/or dress guard ensure the glass front is secured in place. It is critical when fitting the glass front that you double check that it is not scratched or damaged in any way and that you have checked the gasket.



## **Inner frame**

Hook over the glass and secure in place on the two large lower magnets on the front assembly.

## **Outer frame**

Screw into position with the four screws provided. If you have a granite outer frame, refer to separate installation instructions.

## **Mesh dress guard**

No fixings required, this inserts flush into the inner frame by hooking onto the top and then pushing in.

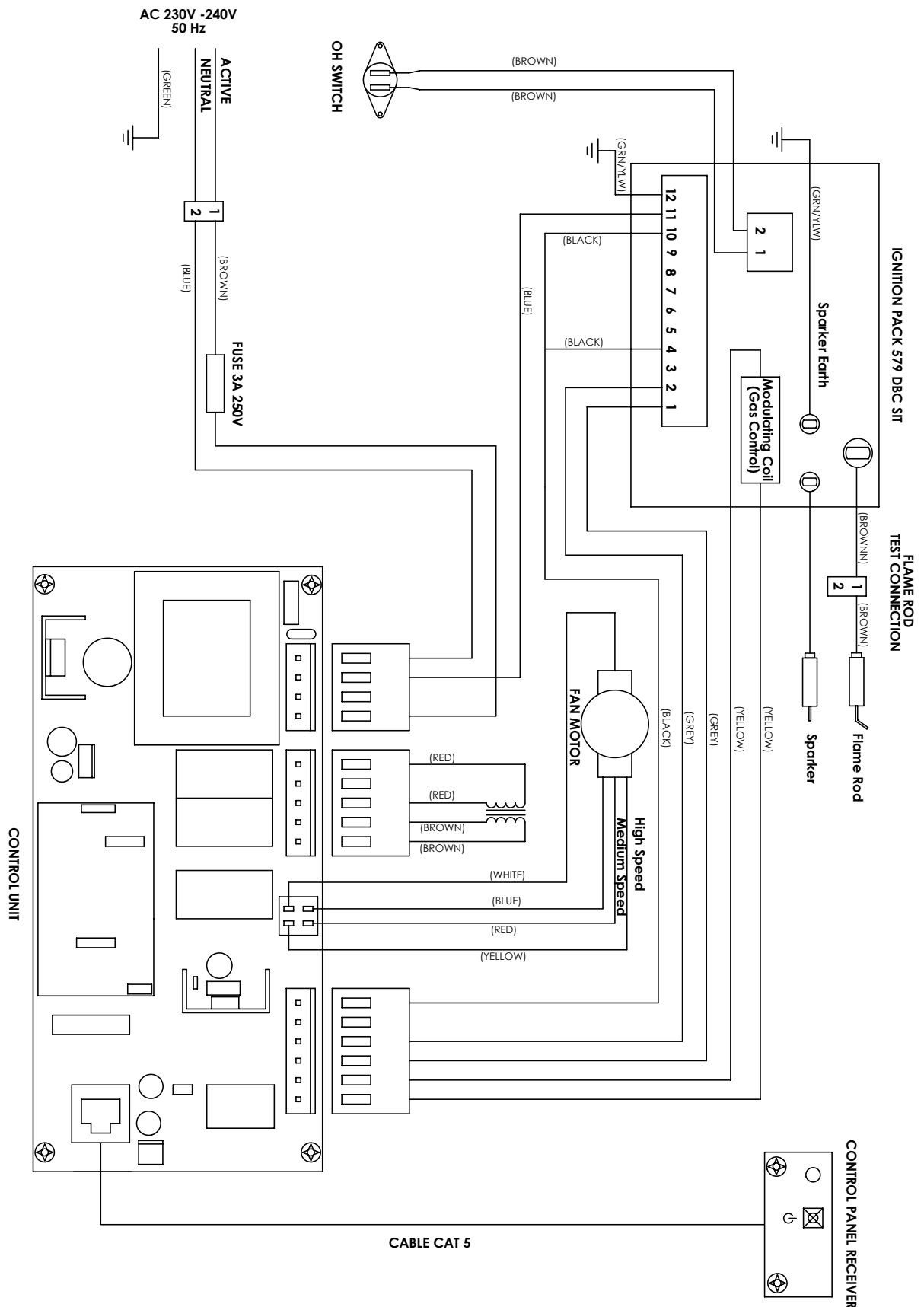
# Commissioning

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Complete the installation and commissioning checklist in the customer operation manual and make sure you leave the manual with the customer. Explain to the customer about the use and care of the unit and they understand the instructions and operation of the appliance.

If operating without a dress guard advise the customer of the safety instructions to prevent the risk of injury.

# Wiring diagram (11652-A)





EXPERIENCE OUR INNOVATION

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**Website:** [www.rinnai.co.nz](http://www.rinnai.co.nz)

All Rinnai appliances meet or exceed the safety standards required by New Zealand gas and electrical regulations.

Rinnai is constantly improving its products and as such information and specifications are subject to change or variation without notice.